(FILE 'HOME' ENTERED AT 11:58:00 ON 13 APR 2004)

FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 11:58:21 ON 13 APR 2004

L1 79760 S DETECTION (S) (DNA OR "TARGET NUCLEIC ACID" OR POLYNUCLEOTIDE
L2 0 S "FIRST OLIGONUCLEOTIDE" AND "SECOND OLIGONUCLEOTIDE" AND "THI
L3 7 S "FIRST PROBE" AND "SECOND PROBE" AND "THIRD PROBE"
L4 5 DUP REM L3 (2 DUPLICATES REMOVED)
L5 367 S L1 AND SANDWICH
L6 2 S L4 NOT PY>1995
L7 2 DUP REM L6 (0 DUPLICATES REMOVED)
L8 202 S L1 AND FLUOROPHORE
L9 125 DUP REM L8 (77 DUPLICATES REMOVED)
L10 19 S L9 NOT PY>=1996
L11 3391 S L1 AND (BIOTIN OR RADIOLABEL OR HAPTEN OR CHORMOPHORE OR DYE)
L12 20 S L11 AND ("SOLID SUPPORT" OR "SOLID MATRIX")
L13 11 DUP REM L12 (9 DUPLICATES REMOVED)
L14 170 S L1 AND "HAIRPIN"
L15 120 DUP REM L14 (50 DUPLICATES REMOVED)
L16 9 S L15 NOT PY>=1995

ANSWER 2 OF 2 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

ACCESSION NUMBER: 1994:78160 BIOSIS

DOCUMENT NUMBER: PREV199497091160

TITLE: Isolates of viral hemorrhagic septicemia virus from North America and Europe can be detected and distinguished by DNA probes.

AUTHOR(S): Batts, W. N. [Reprint author]; Arakawa, C. K. [Reprint author]; Bernard, J.; Winton, J. R. [Reprint author]

CORPORATE SOURCE: Natl. Fish. Res. Cent., Build. 204 Naval Station, Seattle, WA 98115, USA

SOURCE: Diseases of Aquatic Organisms, (1993) Vol. 17, No. 1, pp. 67-71.
CODEN: DAOREO. ISSN: 0177-5103.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 22 Feb 1994
Last Updated on STN: 22 Feb 1994

AB Biotinylated DNA probes were constructed to hybridize with specific sequences within the messenger RNA (mRNA) of the nucleoprotein (N) gene of viral hemorrhagic septicemia virus (VHSV) reference strains from Europe (07-71) and North America (Makah). Probes were synthesized that were complementary to: (1) a 29-nucleotide sequence near the center of the N gene common to both the 07-71 and Makah reference strains of the virus; (2) a unique 28-nucleotide sequence that followed the open reading frame of the Makah N gene mRNA, most of which was absent in the 07-71 strain; and (3) a 22-nucleotide sequence within the 07-71 N gene that had 6 mismatches with the Makah strain. Sixteen diverse isolates of VHSV from North America and Europe were tested by dot blot hybridization. The **first probe** reacted with all isolates of the virus, the **second probe** reacted with only the North American isolates (including those from Pacific cod), and the **third probe** reacted with only the European isolates, including those from rainbow trout, brown trout and Atlantic cod. The probes did not react with mRNA extracted from uninfected cells or from cells infected with infectious hematopoietic necrosis virus (IHNV), a related fish rhabdovirus. The results showed that VHSV isolates from North America and Europe formed 2 genetically distinct strains of the virus in which isolates from different years or species of fish on each continent were more related to each other than to isolates from the other continent. The results of this and other studies indicate that the North American strain of VHSV is enzootic in the North Pacific Ocean and is not a result of a recent importation of fish from Europe. When used in conjunction with a biotinylated probe that recognizes all isolates of IHNV, these reagents promise to simplify the detection of salmonid rhabdoviruses.

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3177 S PRIMER (S) HYBRIDIZ?
L4            43 S L3 (P) SINGLE-STRAND
L5            30 DUP REM L4 (13 DUPLICATES REMOVED)
L6            15 S L5 NOT PY>=1995
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on STN DUPLICATE 4

ACCESSION NUMBER: 90278127 EMBASE
DOCUMENT NUMBER: 1990278127
TITLE: Solid phase non isotopic labelling of oligodeoxynucleotides using 5'-protected aminoalkyl phosphoramidites: Application to the specific **detection** of human papilloma virus **DNA**.
AUTHOR: De Vos M.-J.; Cravador A.; Lenders J.-P.; Houard S.; Bollen A.
CORPORATE SOURCE: Service de Genetique Appliquee, University of Brussels, rue de I'Industrie 24, B-1400 Nivelles, Belgium
SOURCE: Nucleosides and Nucleotides, (1990) 9/2 (259-273).
ISSN: 0732-8311 CODEN: NUNUD5
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
047 Virology
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Phosphoramidites of thymidine or 2'-deoxyinosine, modified in 5' by the addition of an aminoalkylcarbamate function, were prepared. The derivatized nucleotides can be used in automatic **DNA** synthesis to tag any oligodeoxynucleotide chain and provide a convenient reactive group for labelling with non radioactive reporters. As an example of application, we show the specific **detection** of Human Papilloma Virus **DNA** using a **biotin**-labelled 29-mer oligodeoxynucleotide entirely prepared on **solid support**

TLE: A transcriptionally amplified **DNA** probe assay with ligatable probes and immunochemical **detection**

AUTHOR: Carpenter W R; Schutzbank T E; Tevere V J; Tocyloski K R; Dattagupta N; Yeung K K

CORPORATE SOURCE: Miles Inc., Diagnostics Division, Tarrytown, NY 10591.

SOURCE: Clinical chemistry, (1993 Sep) 39 (9) 1934-8.
Journal code: 9421549. ISSN: 0009-9147.

PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199310
ENTRY DATE: Entered STN: 19931105
Last Updated on STN: 19931105
Entered Medline: 19931021

AB Transcriptionally amplified DNA probes are valuable tools in the development of sensitive nucleic acid-based diagnostic assays. Here we describe a model assay using a novel oligonucleotide **hairpin** probe that encodes a T7 RNA polymerase promoter. The **hairpin** probe and an adjacently hybridizing biotinylated capture probe were hybridized to target DNA and the duplex was captured onto streptavidin-coated magnetic particles. After ligation of the immobilized probes, which served to maintain specificity, the **hairpin** probe was transcribed by T7 RNA polymerase. The amplified RNA product was hybridized to the capture probe and bound to the streptavidin-coated magnetic particles. The immobilized heteroduplex was detected with an antibody-alkaline phosphatase conjugate specific for DNA:RNA hybrids, and the chemiluminescent substrate adamantyl-1,2-dioxetane phenyl phosphate. Ten attomoles of target DNA could be detected in a background of 5 micrograms of unrelated DNA. The chemiluminescent immunoassay was as sensitive as radioactive detection of specific product after gel electrophoresis.

ANSWER 6 OF 9 MEDLINE on STN

ACCESSION NUMBER: 89307123 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2744707
TITLE: **Hairpin** extension. A general method for the improvement of sensitivity of oligonucleotide probes.
AUTHOR: Sriprakash K S; Hartas J
CORPORATE SOURCE: Menzies School of Health Research, Darwin, N.T., Australia.
SOURCE: Gene analysis techniques, (1989 Mar-Apr) 6 (2) 29-32. Journal code: 8408118. ISSN: 0735-0651.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198908
ENTRY DATE: Entered STN: 19900309
Last Updated on STN: 19900309
Entered Medline: 19890817

AB A general and sensitive **detection** method of target **DNA** is described. The system is based on an oligonucleotide probe labeled to high specific activity. This involves a novel oligonucleotide design incorporating at the 3' end a **hairpin** structure, allowing extension by polymerase reaction.

ANSWER 7 OF 11 MEDLINE on STN DUPLICATE 1

ACCESSION NUMBER: 92088120 MEDLINE
DOCUMENT NUMBER: PubMed ID: 1750681
TITLE: Europium(III) cryptate: a fluorescent label for the **detection** of **DNA** hybrids on **solid support**.
AUTHOR: Prat O; Lopez E; Mathis G
CORPORATE SOURCE: CIS Biointernational, Laboratoire des Produits pour Analyses Medicales, Bagnols Sur Ceze, France.
SOURCE: Analytical biochemistry, (1991 Jun) 195 (2) 283-9. Journal code: 0370535. ISSN: 0003-2697.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199201
ENTRY DATE: Entered STN: 19920209
Last Updated on STN: 19980206
Entered Medline: 19920121

AB We report here a new **detection** method for **DNA** hybrids on dot blots. The process utilizes DNA or oligonucleotide probes labeled with **biotin**, followed by recognition with a conjugate of streptavidin and europium cryptate, a time-resolved fluorescent label. Unlike the other lanthanide chelates, this label is an organic molecule embedding a europium ion into an intramolecular cavity. This structure has a better stability in diluted assay media, a good sensitivity even on **solid support**, and an elevated fluorescence lifetime which allows elimination of most of the background generated by other species present in the assay medium. This procedure is quantitative and detects down to 2 amol of a model DNA, which is similar to other nonisotopic (especially colorimet

NSWER 8 OF 11 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 90287691 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2162518
TITLE: Fast **solid support detection** of PCR amplified viral **DNA** sequences using radioiodinated or **hapten** labelled primers.
AUTHOR: Sauvaigo S; Fouque B; Roget A; Livache T; Bazin H; Chypre C; Teoule R
CORPORATE SOURCE: CIS BIO International, Departement de Recherche Fondamentale, Grenoble, France.
SOURCE: Nucleic acids research, (1990 Jun 11) 18 (11) 3175-83. Journal code: 0411011. ISSN: 0305-1048.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; AIDS
ENTRY MONTH: 199007
ENTRY DATE: Entered STN: 19900824
Last Updated on STN: 19970203
Entered Medline: 19900725

AB Oligonucleotides with novel modifications have been synthesized and incorporated into enzymatically amplified DNA sequences. They allow the fast **detection** of viral **DNA** sequences after two rounds of amplification. The hybrids formed are immobilized by affinity on coated tubes and detected by direct beta (32P) or gamma (125I) counting or by colorimetric revelation. The effect of a dilution step between the two amplifications is studied to obtain optimal sensitivity and specificity. This test is used to detect Human Papillomavirus types 16 and 18 in cells and biopsies and for the specific colorimetric **detection** of HIV1 in extracted **DNA**.

ANSWER 9 OF 11 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 90274874 MEDLINE
DOCUMENT NUMBER: PubMed ID: 2190592
TITLE: Rapid colorimetric **detection** of in vitro amplified **DNA** sequences.
AUTHOR: Lundeberg J; Wahlberg J; Holmberg M; Pettersson U; Uhlen M
CORPORATE SOURCE: Royal Institute of Technology, Department of Biochemistry and Biotechnology, Stockholm, Sweden.
SOURCE: DNA and cell biology, (1990 May) 9 (4) 287-92.
Journal code: 9004522. ISSN: 1044-5498.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199007
ENTRY DATE: Entered STN: 19900824
Last Updated on STN: 19900824
Entered Medline: 19900717

AB A colorimetric assay to detect immobilized amplified nucleic acids has been designed. This approach provides a rapid assay, suitable for clinical diagnosis, to analyze DNA sequences amplified by the polymerase chain reaction. The specific DNA sequences are captured on a **solid support** by the use of a recombinant fusion protein consisting of the Escherichia coli lac repressor and staphylococcal protein A. The **biotin** streptavidin system is used to detect the immobilized material. Positive samples can be analyzed by direct solid-phase sequencing. Here, we show that this nonradioactive concept can be used for analysis of Staphylococci and Streptococci and for specific detection of the protozoa Plasmodium falciparum in clinical samples.

TITLE: DNA fingerprinting of pathogenic bacteria by **fluorophore**-enhanced repetitive sequence-based polymerase chain reaction.

AUTHOR: Versalovic J; Kapur V; Koeuth T; Mazurek G H; Whittam T S; Musser J M; Lupski J R

CORPORATE SOURCE: Department of Molecular and Human Genetics, Baylor College of Medicine, Houston, TX 77030.

CONTRACT NUMBER: 1F31GM14601-01 (NIGMS)
AI33119 (NIAID)
AI37004 (NIAID)

SOURCE: Archives of pathology & laboratory medicine, (1995 Jan) 119 (1) 23-9.
Journal code: 7607091. ISSN: 0003-9985.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals

ENTRY MONTH: 199501

ENTRY DATE: Entered STN: 19950215
Last Updated on STN: 19950215
Entered Medline: 19950124

AB **Fluorophore**-labeled oligonucleotide primers complementary to defined interspersed repetitive sequences conserved in diverse bacteria were used in the polymerase chain reaction to generate DNA fingerprint patterns from selected pathogenic bacteria. **Fluorophore**-enhanced, repetitive sequence-based polymerase chain reaction allowed discrimination between unrelated isolates of penicillin-resistant Streptococcus pneumoniae recovered from pediatric patients and Mycobacterium avium cultured from patients with acquired immunodeficiency syndrome. Combinations of oligonucleotide primers labeled with distinct fluorescent dyes enabled simultaneous **DNA** fingerprinting and Shiga-like toxin gene **detection** in enterohemorrhagic Escherichia coli isolates. **Fluorophore**-enhanced, repetitive sequence-based polymerase chain reaction was performed with either purified DNA or intact cells that were lysed during the polymerase chain reaction.